SEQUENCE LISTING

<110> Joyce, Gerald F.
Breaker, Ronald R.

<120> ENZYMATIC DNA MOLECULES

<130> SCR2190S

<140> 09/423,035
<141> 2000-01-13

<150> PCT/US98/08677
<151> 1998-04-29

<150> 60/045,228
<151> 1997-04-29

<160> 131

<170> PatentIn Ver. 2.1

<210> 1
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: 3' terminal sequence

<400> 1
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<210> 2
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<220>
<223> Description of Combined DNA/RNA Molecule: The N at position 8 is adenosine ribonucleotide.

<220>
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<400> 2

tcactatnag gaagagatgg 20

<210> 3
<211> 38
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<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 3
acacatctct gaagtagcgc cgccgtatag tgacgcta 38

<210> 4
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<212> DNA
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<220>
<223> Description of Artificial Sequence: oligomer

<220>
<221> misc_feature
<222> (16)..(65)
<223> n is an equimolar mixture of G, A, T and C

<400> 4
gtgccaagct taccgnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60
nnnnngtcgc catctcttcc 80

<210> 5
<211> 28
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<220>
<223> Description of Combined DNA/RNA Molecule: The n
at position 28 is adenosine ribonucleotide.

<220>
<221> misc_feature
<222> (28)
<223> 2'3' cyclic phosphate.

<220>

<223> Description of Artificial Sequence: cleavage
produce

<400> 5
gggacgaatt ctaatacgac tcactatn 28

<210> 6
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<223> Description of Combined DNA/RNA Molecule: The n
at position 28 is adenosine ribonucleotide.

<220>
<223> Description of Artificial Sequence: primer

<400> 6
gggacgaatt ctaatacgac tcactatn 28

<210> 7
<211> 19
<212> DNA
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<220>
<223> Description of Combined DNA/RNA Molecule: The n
at position 8 is adenosine ribonucleotide.

<220>
<223> Description of Artificial Sequence: substrate

<400> 7
tcactatngg aagagatgg 19

<210> 8
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<220>
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<222> (8)
<223> The n at position 8 is adenosine nucleotide.

<220>
<223> Description of Artificial Sequence: template

<400> 8
tcactatn 8

<210> 9
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: template

<400> 9
ccatctcttc ctatagtgag tccggctgca 30

<210> 10
<211> 15
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B'

<220>
<223> Description of Artificial Sequence: primer

<400> 10
gtgccaagct taccg 15

<210> 11
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 11
ctgcagaatt ctaatacgac tcactatagg aagagatggc gac 43

<210> 12
<211> 19
<212> DNA
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<220>
<223> Description of Combined DNA/RNA Molecule: The n
at position 8 is adenosine ribonucleotide.

<220>
<223> Description of Artificial Sequence: substrate

<400> 12
tcactatngg aagagatgg 19

<210> 13
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Combined DNA/RNA Molecule: The n
at position 28 is adenosine ribonucleotide.

<220>
<223> Description of Artificial Sequence: fixed
substrate

B'

<400> 13
gggacgaatt ctaatacgac tcactatngg aagagatggc gac 43

<210> 14
<211> 50
<212> DNA
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<220>
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domain

<400> 14
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<210> 15
<211> 50
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: DNA enzyme
domain

<400> 15
gggggggaacg ccgtaacaag ctctgaacta gcggttgcga tatagtcgta 50

<210> 16
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme
domain

<400> 16
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<210> 17
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme
domain

<400> 17
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<210> 18
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme
domain

<400> 18
gccagattgc tgctaccagc ggtacgaaat agtgaagtgt tcgtgactat 50

<210> 19
<211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme domain

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<210> 20
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme domain

<400> 20
tctgctctcc tctattctag cagtgcagcg aaatatgtcg aatagtcggt 50

<210> 21
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme domain

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ttgcccagca tagtcggcag acgtggtgtt agcgacacga taggcccggt 50

<210> 22
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme domain

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<210> 23
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<220>
<223> Description of Combined DNA/RNA Molecule: The n
at position 28 is adenosine ribonucleotide.

<220>
<223> Description of Artificial Sequence: oligomer

<220>
<221> misc_feature
<222> (49)..(88)
<223> n is an equimolar mixture of G, A, T and C

<400> 23
gggacgaatt ctaatacgac tcactatngg aagagatggc gacatctcnn nnnnnnnnnn 60
nnnnnnnnnn nnnnnnnnnn nnnnnnnngt gacggtaagc ttggcac 107

<210> 24
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 24
ccgcccacct cttttacgag cctgtacgaa atagtgctct tgttagtat 49

<210> 25
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 25
tctcttcagc gatgcacgct tgttttaatg ttgcacccat gttagtga 48

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 26
tctcatcagc gattgaacca cttggtggac agacccatgt tagtga 46

<210> 27
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 27
ccgcccacct cttttacgag cctgtacgaa atagtgttct tgttagtat 49

<210> 28
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 28
ccgcccacct cttttacgag cctgtacgaa atagtgctct cgttagtat 49

<210> 29
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 29
tctcagactt agtccatcac actctgtgca tatgcctgct tgatgtga 48

<210> 30
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 30
ctctcatctg ctagcacgct cgaatagtgt cagtcgatgt ga 42

<210> 31
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 31
tacagcgatt cacccttgtt taagggttac acccatgtta 40

<210> 32
<211> 40
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<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 32
atcagcgatt aacgcttgtt tcaatgttac acccatgtta 40

<210> 33
<211> 40
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<213> Artificial Sequence

<220>
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<400> 33
ttcagcgatt aacgcttatt ttagcgttac acccatgtta 40

<210> 34
<211> 40
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<220>
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<400> 34
atcagcgatt cacccttgtt ttaaggttgc acccatgtta 40

<210> 35
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 35
atcagcgatt cacccttgtt taagcgttac acccatgttg 40

<210> 36
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 36
atcagcgatt cacccttgtt ttaaggttac acccatgtta 40

<210> 37
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 37
atcagcgatt aacgcttatt ttagcgttac acccatgtta 40

<210> 38
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 38
atcagcgatt aacgcttgtt ttagtgttgc acccatgtta 40

<210> 39
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 39
atcagcgatt aacgcttatt ttagcattac acccatgtta 40

<210> 40
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 40
gccatgcttt 10

<210> 41
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 41
ctctatttct 10

<210> 42
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 42
tatgtgacgc ta 12

<210> 43
<211> 10
<212> DNA
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<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 43
tatagtcgta 10

<210> 44
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 44
atagcgtatt a 11

<210> 45
<211> 13
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate

binding region

<400> 45
atagttacgt cat 13

<210> 46
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 46
aatagtgaag tgtt 14

<210> 47
<211> 11
<212> DNA
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<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 47
ataggcccgg t 11

<210> 48
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: substrate
binding region

<400> 48
aatagtgagg cttg 14

<210> 49
<211> 12
<212> RNA

<213> Human immunodeficiency virus type 1

<400> 49
guaacuagag au 12

<210> 50
<211> 98
<212> DNA
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<220>
<223> Description of Combined DNA/RNA Molecule:
Positions 7-18 is RNA; the remainder of the
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<220>
<223> Description of Artificial Sequence: DNA enzyme

<220>
<221> misc_feature
<222> (34)..(83)
<223> n is an equimolar mixture of G, A, T and C

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nnnnnnnnnn nnnnnnnnnn nnncggtaag cttggcac 98

<210> 51
<211> 99
<212> DNA
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<220>
<223> Description of Combined DNA/RNA Molecule:
Positions 1-24 is RNA; the remainder of the
sequence is DNA.

<220>
<223> Description of Artificial Sequence: DNA enzyme

<220>
<221> misc_feature
<222> (35)..(84)
<223> n is an equimolar mixture of G, A, T and C

<400> 51

ggaaaaagua acuagagaug gaagagatgg cgacnnnnnn nnnnnnnnnn nnnnnnnnnn 60
nnnnnnnnnn nnnnnnnnnn nnnncggtaa gcttggcac 99

<210> 52
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 52
ccaatagtgc tactgtgtat ctcaatgctg gaaacacggg ttatctcccg 50

<210> 53
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 53
ccaaaacagt ggagcattat atctactcca caaagaccac ttttctcccg 50

<210> 54
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 54
atccgtacta gcatgcagac agtctgtctg ctttttcatt actcactccc 50

<210> 55
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 55
caattcatga tgaccaactc tgtcaacacg cgaactttta acactggca 49

<210> 56
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 56
cttccacctt ccgagccgga cgaagttact ttttatcaca ctacgtattg 50

<210> 57
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 57
ggcaagagat ggcatatatt caggtaactg tggagatacc ctgtctgcca 50

<210> 58
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 58
ctagaccatt cacgtttacc aagctatggt aagaactaga atcacgcgta 50

<210> 59
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 59
cgtacacgtg gaaaagctat aagtcaagtt ctcatcatgt acctgaccgc 50

<210> 60
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 60
cagtgataca tgagtgcacc gctacgacta agtctgtaac ttattctacc 50

<210> 61
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 61
accgaattaa actaccgaat agtgtggttt ctatgcttct tcttccctga 50

<210> 62
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 62
caggtagata taatgcgtca ccgtgcttac actcgtttta ttagtatgtc 50

<210> 63
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 63
ccctacaaca ccactgggcc caattagatt aacgctattt tataactcg 49

<210> 64
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 64
ccaaacggtt ataagactga aaactcaatc aatagcccaa tcctcgccc 49

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 65
cacatgtata cctaagaaat tggtcccgta gacgtcacag acttacgcca 50

<210> 66
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 66
cacaacgaaa acaatcttcc ttggcatact ggggagaaag tctgttgtcc 50

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 67
cacacgaaca tgtccattaa atggcattcc gtttttcgtt ctacatatgc 50

<210> 68
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 68
cagaacgagg gtcttgtaag actacacctc ctcagtgaca ataatcctg 49

<210> 69
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 69
cactacagcc tgatatatat gaagaacagg caacaagctt atgcactgg 49

<210> 70
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 70
gggtacattt atgattctct tataaagaga atatcgtact cttttcccca 50

<210> 71
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 71
ccaaagtaca ttccaacccc ttatacgtga aacttccagt agtttccta 49

<210> 72
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 72
cttgaagatc ctcataagac gattaaacaa tccactggat ataatccgga 50

<210> 73
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 73
cgaatagtgt ccatgattac accaataact gcctgcctat catgtttatg 50

<210> 74
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 74
ccaagagagt atcggataca cttggaacat agctaactcg aactgtacca 50

<210> 75
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 75
ccactgataa ataggtaact gtctcatatc tgccaatcat atgccgta 48

<210> 76
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 76
cccaaattat aaacaattta acacaagcaa aaggaggttc attgctccgc 50

<210> 77
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 77
caataaactg gtgctaaacc taataccttg tatccaagtt atcctccccc 50

<210> 78
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 78
ccgaatgaca tccgtagtgg aaccttgctt ttgacactaa gaagctacac 50

<210> 79
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 79
ccataacaaa taccatagta aagatctgca ttatattata tcggtccacc 50

<210> 80
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 80
cagaacaaag atcagtagct aaacatatgg tacaaacata ccatctcgca 50

<210> 81
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 81
cctttagtta ggctagctac aacgattttt ccctgcttgg caacgacac 49

<210> 82
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 82
ctccctacgt tacaccagcg gtacgaattt tccacgagag gtaatccgca 50

<210> 83
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 83
cggcacctct agttagacac tccggaattt ttcccc 36

<210> 84
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 84
cggcacctct agttagacac tccggaattt tagcctacca tagtccggt 49

<210> 85
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 85
ccctttggtt aggctagcta caacgatttt tccctgcttg aattgta 47

<210> 86
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 86
ccctttggtt aggctagcta caacgatttt tccctgcttg acctgttacg a 51

<210> 87
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 87
cctttagtta ggctagctac aacgattttt ccctgcttgg aacgacac 48

<210> 88
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 88
catggcttaa tcatcctcaa tagaagacta caagtcgaat atgtcccccc 50

<210> 89
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 89
caacagagcg agtatcaccc cctgtcaata gtcgtatgaa acattgggcc 50

<210> 90
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 90
taccgacaag gggaattaaa agctagctgg ttatgcaacc cttttcgca 49

<210> 91
<211> 49
<212> DNA
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<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 91
ctcgaaacag tgatattctg aacaaacggg tactacgtgt tcagccccc 49

<210> 92
<211> 50
<212> DNA
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<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 92
ccaataacgt aacccggtta gataagcact tagctaagat gtttatcctg 50

<210> 93
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 93
caatacaatc ggtacgaatc cagaaacata acgttgtttc agaatggtcc 50

<210> 94
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 94
gcaacaacaa gaaccaagtt acatacacgt tcatctatac tgaaccccca 50

<210> 95
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 95
cctttgagtt cctaaatgcc gcacggtaag cttggcacac tttgactgta 50

<210> 96
<211> 49
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<223> Description of Artificial Sequence: DNA enzyme

<400> 96
caaagatctc actttggaaa tgcgaaatat gtatattcgc cctgtctgc 49

<210> 97
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 97
ccacgtagaa ttatctgatt tataacataa cgcaggataa ctctcgccca 50

<210> 98
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<212> DNA
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<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 98
cacaagaaag tgtcgtctcc agatatttga gtacaaggaa ctacgccc 48

<210> 99
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 99
catgaagaaa taggacattc tacaggctgg accgttacta tgcctgtagg 50

<210> 100
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 100
cataggataa tcatggcgat gcttatgacg tgtacatcta tacctt 46

<210> 101
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 101
cagatgatct tcctttaaag actacccttt aaagaaacat aaggtacccc 50

<210> 102
<211> 17
<212> RNA
<213> Human immunodeficiency virus

<400> 102
ggagagagau gggugcg 17

<210> 103
<211> 15
<212> RNA
<213> Human immunodeficiency virus

<400> 103
gagagagaug ggugc 15

<210> 104
<211> 17

<212> RNA
<213> Human immunodeficiency virus

<400> 104
caguggcaau gagagug 17

<210> 105
<211> 15
<212> RNA
<213> Human immunodeficiency virus

<400> 105
aguggcaaug agagu 15

<210> 106
<211> 17
<212> RNA
<213> Human immunodeficiency virus

<400> 106
gaggauagau ggaacaa 17

<210> 107
<211> 15
<212> RNA
<213> Human immunodeficiency virus

<400> 107
aggauagaug gaaca 15

<210> 108
<211> 15
<212> RNA
<213> Human immunodeficiency virus

<400> 108
gcaagaaaug gagcc 15

<210> 109
<211> 15
<212> RNA
<213> Human immunodeficiency virus

<400> 109
cuauaagaug gguga 15

<210> 110
<211> 20
<212> RNA
<213> Feline infectious peritonitis virus

<400> 110
uacagcaaca uggggaaugg 20

<210> 111
<211> 18
<212> RNA
<213> Feline infectious peritonitis virus

<400> 111
cauggggaau ggacaggg 18

<210> 112
<211> 23
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 112
caaauaaaag ggaugaaguc ugg 23

<210> 113
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 113
aaggaaugaa gucuggcucc g 21

<210> 114
<211> 23

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 114
auaccgcaaa gucuuugaga auu 23

<210> 115
<211> 23
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 115
aagucuuuga gaguuuccug cac 23

<210> 116
<211> 19
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 116
aacaccacca uguccagcc 19

<210> 117
<211> 20
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 117
ggccuuucac auuguaccgc 20

<210> 118
<211> 21

<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 118
uuguaccgca ucgauaucca c 21

<210> 119
<211> 23
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: RNA

<400> 119
gaacauuaca uuauagugac cag 23

<210> 120
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 120
tccgagccgg acga 14

<210> 121
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 121
rggctagcta caacga 16

<210> 122
<211> 16

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<220>
<221> misc_feature
<222> (9)
<223> H = T, C or A

<400> 122
rggctagcha caacga 16

<210> 123
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<220>
<221> misc_feature
<222> (18)
<223> The N at position 18 is adenosine ribonucleotide.

<400> 123
ctaatacgac tcactatngg aagagatggc gacatctctt cagcgatgca cgcttgtttt 60
aatgttgcac ccatgttag 79

<210> 124
<211> 75
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 124
gtgccaagct taccgagtaa cttcgtccgg ctcggragat gggtcgtctg tccttccatc 60
tctagttact ttttc 75

<210> 125
<211> 78

<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 125
gttgccaagc ttaccgggaa aaatcgttgt agctagccta actaggtcgt ctgtccttcc 60
atctctagtt actttttc 78

<210> 126
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 126
ggaaggacag acgacccatc 20

<210> 127
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 127
gtgccaagct taccgggaaa aa 22

<210> 128
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 128
ggaaggacag acgacctagt t 21

<210> 129

<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 129
gaaaaagtaa ctagagatgg aaggacagac gacc 34

<210> 130
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

B'

<400> 130
cacggttcga atggcgttat gcatcacact atttttcatt gaagcaggcc gagccttcca 60
ccttccagcg gtagagaagg 80

<210> 131
<211> 77
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: DNA enzyme

<400> 131
cacggttcga atggcatgtt aagttcgtcc ctttttagca acatcgatcg gattggtttc 60
cccagcggta gagaagg 77